Title: MATERIALS AND METHODS RELATING TO THERAPY AND DIAGNOSIS USING TARGETING OF CELLS THAT EXPRESS JPL POLYPEPTIDES

Applicants: Peter C.R. Emtage et al. Docket No.: NUVO-05
1/4

GCCCCAGCAGGCTCTCCAGTCCCAGGATGCGCTGAGCCGCCGGGGGGGCTGAGGCCGCCCAACTACATG GCACATGGCTACGGCGTGTGCACGGGCCCCGGCGCCCAGGGCGAGTACAGCGGCTGCTGGGCACACGGCT TCGAGTCACTGGGCGTCTTCACGGGGCCCGGCGGACACAGCTACCAGGGCCACTGGCAGCAGGGCAAGCG CGCAGCGGCGTGTGGGAAAGCGTGTCCGGCCTGCGCTACGCCGGGCTCTGGAAGGACGGTTTCCAGGACG GCTACGGCACTGAGACCTACTCCGACGGAGGCACCTACCAGGGCCAGTGGCAGGCCGGGAAGCGCCACGG CTACGGGGTACGCCAGAGTGTGCCCTACCATCAGGCGGCGCTGCTGCGCTCGCCCCGCCGCACCTCCCTG CGCAGCTCCCTGGGCAGCAGCGAGGCTCCCTGCGCAGCGAGGTGAGCAGCGAGGTGGGCAGCACCGGAC CGCTACGAGGGCGAGTGGCTGGGCAACCGGCGGCACGGCTACGGGCGCACCACCCGCCCCGACGGCTCCC GCGAGGAGGCCAAGTACAAGCGCAACCGGCTGGTGCACGGCGGGGGGGCGTCCGCAGTCTCCTGCCTCTGGC GTGTCGCTGAGAAGGCCGTGGAGGCAGCTCGAATGGCCAAACTGATAGCCCAGGACCTGCAGCCCATGCT AGAGGCCCCAGGCCGCAGACCCAGGCAGGACTCAGAAGGTTCCGACACGGAGCCCCTGGATGAGGACAGC $\tt CCCGCCAACCCTGGCGACCCCTGCCTGCCGGAGCCCACTGCCTCCTGGAGGGGACCAGGGTCCCTTCTC$ CAGCCCAAAGCTTGGCCTGAGGAGTGGGGGGGGGGCAGGCCACAGGCAGAGGAACTAGCTGGCTATGAG GCTGAGGATGAGGCTGGGATGCAAGGGCCAGGGCCCAGAGACGGTTCCCCACTCCTCGGAGGCTGCAGCG ACAGTTCAGGAAGTCTTCGAGAGGAGGAGGGGGGGAGGATGAAGAGCCCCTGCCCCCGCTGAGGGCCCCAGC AGGCACGGAGCCTGAGCCCATCGCCATGCTGGTCCTGAGGGGCTCGTCCTCGAGGGGTCCTGATGCTGGG TGCCTGACAGAAGAGCTCGGGGAGCCCGCTGCAACCGAGAGGCCTGCCCAGCCGGGAGCTGCCAACCCCC TGGTGGTGGAGCCGTGGCCCTCCTGGACCTCAGCCTGGCATTCCTGTTCTCCCAGCTCCTCACCTGAGG $\tt CTACTTCCTGGCCTGGTTCTGGCTTTGGTTGCGTGCCTCTTCACCCCTTTGACCTGCCTTTTTTCTCTTC$ TTTTCTCTCGCTTTTTCTTTCCCTGTCTTCTTTCAGATTATCTCATTTCTTCTGGATCTGTCTCTGTATT AGAGTTGCTGTCTCTGAGACACACAAATCTAAGTCAGACCATTGCTCCACGCCCTCCCACCTTTTCT TTAGACCTCAACTTCGCTGCGGGTGGGGGTTTGGTGTCCTAAGGAGACTCCTGGAAGCTGAATGGAGAGG AGGAAGAAATGAAGAAGGAGTGATTGAATGTCGGGCAAGGCACTGGCTGAGCTGCTGTGGCTCCCTAGC $\tt CTAAGGGGCCTGCTGTCCCTCTGAGGCCTAGTGAAAAAGCTGCAGGAGGTGCATCCTCCACCTCTAATCT$ TGGAGGCTATTATCTTACCTCCAAGCACTGAGCTGGGTTACTGCCCCAATTCCATCCTTCCCTGAAGGAGA GAAGGGAAGTGAAAAGTAGAGTAACTCCCCAGCATTTCCCTCTTTTTCTCCTCATCGGCCAGCCCCTCCT CCAGCCCCTCTGGTGGCATGCCATGCCAAGAGCAACGTGTAAAGGAACAGAGAATATCCAATGCAGTCA AGTCCACCCTGCCCAGACTTTGCCACTGACTTCTCCCACCCTTCTGTCTCCCCCATAATAGTTTATTTGG TTGGTCTGGACTCACTTGTGGCCTTTGATTAAATTCCTAAGGGGCCTGAAGAAGACATTTCTACTGCAGA GGGTTAGAGCACTTGAGCAAGGCCCCCACATCCCAACTCTGGGAGTTGTGGGGAGGAGGAGCACTTCTG GGGGATAGGACCAGACAAGATAACAGGAGCTCACATGGAAGCAGAAGCTGTGACAAGTTTAGTAGTCCCA AAATGGGTTATATCCCTTCCCCTCGTGCCGAATTCTTGGCCTCGAGGGCCAAAT

Title: MATERIALS AND METHODS RELATING TO THERAPY AND DIAGNOSIS USING TARGETING OF CELLS THAT EXPRESS JPL POLYPEPTIDES

Applicants: Peter C.R. Emtage et al. Docket No.: NUVO-05

2/4

MSPGGKFDFDDGGCYVGGWEAGRAHGYGVCTGPGAQGEYSGCWAHGFESL	50
GVFTGPGGHSYQGHWQQGKREGLGVERKSRWTYRGEWLGGLKGRSGVWES	100
VSGLRYAGLWKDGFQDGYGTETYSDGGTYQGQWQAGKRHGYGVRQSVPYH	150
QAALLRSPRRTSLDSGHSDPPTPPPPLPLPGDEGGSPASGSRGGFVLAGP	200
GDADGASSRKRTPAAGGFFRRSLLLSGLRAGGRRSSLGSKRGSLRSEVSS	250
EVGSTGPPGSEASGPPAAAPPALIEGSATEVYAGEWRADRRSGFGVSQRS	300
NGLRYEGEWLGNRRHGYGRTTRPDGSREEGKYKRNRLVHGGRVRSLLPLA	350
LRRGKVKEKVDRAVEGARRAVSAARQRQEIAAARAADALLKAVAASSVAE	400
KAVEAARMAKLIAQDLQPMLEAPGRRPRQDSEGSDTEPLDEDSPGVYENG	450
LTPSEGSPELPSSPASSRQPWRPPACRSPLPPGGDQGPFSSPKAWPEEWG	500
GAGAQAEELAGYEAEDEAGMQGPGPRDGSPLLGGCSDSSGSLREEEGEDE	550
EPLPPLRAPAGTEPEPIAMLVLRGSSSRGPDAGCLTEELGEPAATERPAQ	600
PGAANPLVVGAVALLDLSLAFLFSQLLT	629

Title: MATERIALS AND METHODS RELATING TO THERAPY AND DIAGNOSIS USING TARGETING OF CELLS

THAT EXPRESS JPL POLYPEPTIDES

Applicants: Peter C.R. Emtage et al. Docket No.: NUVO-05

3/4

JP-3	MSSGGRFNFDDGGSYCGGWEDGKAHGHGVCTGPKGQGEYTGSWSHGFEVLGVYTWPSGNTYQGTWAQGKRHG	72
JP-1	-MTGGRFDFDDGGTYCGGWEEGKAHGHGICTGPKGQGEYSGSWSHGFEVVGGYTWPSGNTYQGYWAQGKRHG	71
	-MSGGRFDFDDGGAYCGGWEGGKAHGHGLCTGPKGQGEYSGSWNFGFEVAGVYTWPSGNTFEGYWSQGKRHG	71
JPL	MSPGGKFDFDDGGCYVGGWEAGRAHGYGVCTGPGAOGEYSGCWAHGFESLGVFTGPGGHSYOGHWOOGKREG	72
OFÜ	****** * **** * *** * *** * *** * * *	12
TD 3		
	IGLESKGKWVYKGEWTHGFKGRYGVRECAGNGAKYEGTWSNGLQDGYGTETYSDGGTYQGQWVGGMRQGYGV	
	${\tt LGVETKGKWMYRGEWSHGFKGRYGVRQSLCTPARYEGTWSNGLQDGYGVETYGDGGTYQGQWAGGMRHGYGV}$	
JP-2	LGIETKGRWLYKGEWTHGFKGRYGIRQSSSSGAKYEGTWNNGLQDGYGTETYADGGTYQGQFTNGMRHGYGV	143
\mathtt{JPL}	LGVERKSRWTYRGEWLGGLKGRSGVWESVS-GLRYAGLWKDGFQDGYGTETYSDGGTYQGQWQAGKRHGYGV	143
	:*:* * : : * *:** * : : : : * * * : : * * * : * * * : * * * : * * * : * * * : * * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * * : * : * * : * : * * : * * :	
JP-3	RQSVPYGMAAVIRSPLRTSINSLRSEHTNGTPLHP-DASPAVDGSPAVSRGGFVLVAHSDSEILK	208
	RQSVPYGMATVIRSPLRTSLASLRSEQSNGSVLHDAAAAADSPAGTRGGFVLNFHADAELAG	
	RQSVPYGMAVVVRSPLRTSLSSLRSEHSNGTVAPDSPASPASDGPALPSPAIPRGGFALSLLANAEAAAR	
	·	
JPL	RQSVPYHQAALLRSPRRTSLDSGHSDPPTPPPPLPLPGDEGGSPASGSRGGFVLAGPGDADGASSRK	210
2	****** * .:: *** ***: * :::	
	SKKKGLFRR-SLLSGLKLRKSESKSSLASQRSKQSSFRSEAGMSTVSSTASDIHSTISLGEAEAELA	
	KKKGGLFRRGSLLGSMKLRKSESKSSISSKRSSVRSDAAMSRISSSDANSTISFGDVDCDFC	
JP-2	- APKGGGLFQRGALLG - KLRRAESRTSVGSQRS RVSFLKSDLSSGASDAASTASLGEAAEGADEAA	277
\mathtt{JPL}	RTPAAGGFFRRSLLLSGLRAGGRRSSLGSKRGSLRSEVSSEVGSTGPPGSEASGP-PAA	268
	:: * **.	
JP-3	VIEDDIDATTTETYVGEWKNDKRSGFGVSQRSDGLKYEGEWASNRRHGYGCMTFPDGTKEEGKYKQNILVGG	346
	PVEDHVDATTTETYMGEWKNDKRNGFGVSERSNGMKYEGEWANNKRHGYGCTVFPDGSKEEGKYKNNILVRG	
	PFEADIDATTTETYMGEWKNDKRSGFGVSERSSGLRYEGEWLDNLRHGYGCTTLPDGHREEGKYRHNVLVKD	
	APPALIEGSATEVYAGEWRADRRSGFGVSQRSNGLRYEGEWLGNRRHGYGRTTRPDGSREEGKYKRNRLVHG	100
JPL	::.::**.* ***: *:*.****** .* ***** .* ***** .* ****	
JP-3	KR-KNLIPLRASKIREKVDRAVEAAERAATIAKQKAEIAASRTSHSRAKAEAALTAAQKAQEEARIARIT	415
JP-1	IR-KQLIPIRHTKTREKVDRAIEGAQRAAAMARTKVEIANSRTAHARAKADAADQAALAARQECDIARAV	408
JP-2	TK-RRMLQLKSNKVRQKVEHSVEGAQRAAAIARQKAEIAASRTSHAKAKAEAAEQAALAANQESNIARTL	418
JPL	GRVRSLLPLALRRGKVKEKVDRAVEGARRAVSAARQRQEIAAARAADALLKAVAASSVAEKAVEAARMAKLI	468
	: : :: * ::**:::*.*.*.* *: : *** : *::: ** ** .* * : . :*:	
JP-3	AKEFSPSFQHRENGLEYQRPKRQTSCDDIEVLSTGTPLQQESPELYRKGTTPSDLTPDDSPLQSFPTS	483
	ARELSPDFYQPGPDYVKQRFQEGVDAKENPEEKVPEKPPTPKESPHFYRKGTTP-PRSPEASPKHSHS	
	ARELAPDFYQPGPEYQKRRLLQEILENSESLLEPPDRGAGAAGLPQPPRESPQLHERETPRPEGGSPS	
	AQDLQPMLEAPGRRPRQDSEGSDTEPLDEDSPGVYENGLTPSEGSPELPSSPAS-SR	
JPL	*::: *: : : : : : : : : : : : : : : : :	408
70-3	PAATPPPAPAARNKVAHFSRQVSVDEERGGDIQMLLEGRAGDCARSSWGEEQAGGSRGVRSGALRGGLLVDD	555
	PASSPKPLKKQNPSSGARLNQDKRSVADEQVTALVNK	
	PAGTPPQPKRPGSRSV	
JPL	QPWRPPACRSPLPPGGDQGPFSSPKAWPEEWGG	201
_		
	FRTRGSGRKQPGNPKPRERRTESPPVFTWTSHHRASNHSPGGSRLLELQEEKLSNYRMEMKPLLR-METHPQ	
	PLMSKAPTKEAGAVVPQSKYSGRHHIPNPSNGELHSQYHGYYVKLNAPQHPPV	
	TPSEGAGRRSPARPATERMAIEALQAPPAPSREPEVALYQGYHŞYAVRTTPPEPPPFEDQPE	
JPL	AGAQAEELAGYEAEDEAGMQGPGPRDGSPLLG	533
	·	
JP-3	KRRYSKGGACRGLGDDHRPEDRGFGVQRLRSKAQNKENFRPASSAEPAVQKLASLRLGGAEPRLLRWDLTFS	698
	DVEDGDGSSQSSSALVHKPSANKWSPSKSVTKPVAKESKAEPKAKKSELA	
	PEVSGSESAPSSPATAPLQAPTLRGPEPARETPAKLEPKPIIPKAEPRAKARKTEARGLT	
JPL	GCSDSSGSLREEEGEDEEPLPPLRAPAGTEPEPIAMLVLRGSSSRGPDAGCLT	
UPL	.	200
TD 2	DDOUGLEWAL DODDWODDL MOGROCA DILLNAGALLI MAGAZILI MAGAZIL	
	PPQKSLPVALESDEENGDELKSSTGSA-PILVVMVILLNIGVAILFINFFI 748	
	IPKNPASNDSCPALEKEANSGPN-SIMIVLVMLLNIGLAILFVHFLT 661	
JP-2	KAGAKKKARKEAALAAEAEVEVEEVPN-TILICMVILLNIGLAILFVHLLT 696	
JPL	EE-LGEPAATERPAQPGAANPLVVGAVALLDLSLAFLFSQLLT 628	
	* * * * * * * * * * * * * * * * * * * *	

Title: MATERIALS AND METHODS RELATING TO THERAPY AND DIAGNOSIS USING TARGETING OF CELLS

THAT EXPRESS JPL POLYPEPTIDES

Applicants: Peter C.R. Emtage et al. Docket No.: NUVO-05

4/4

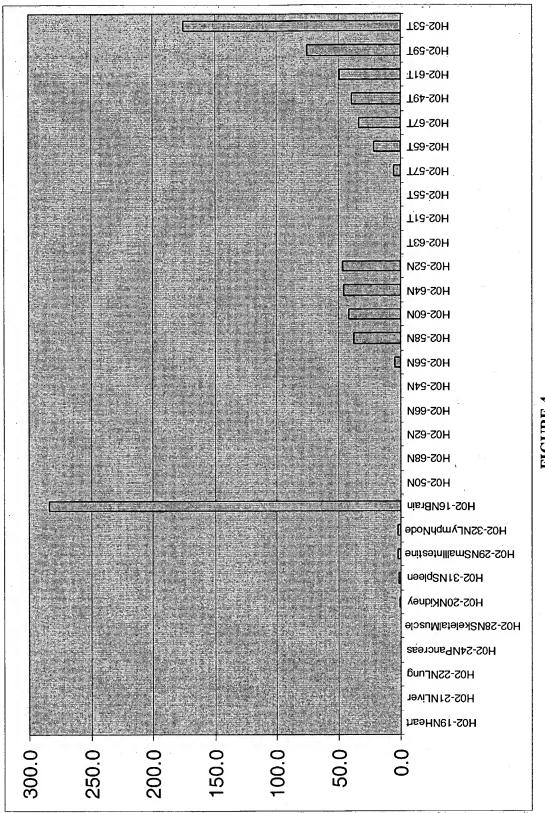


FIGURE 4